



SYMPHONY

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Musicians' Mic Amplifier & Monitor Mix For Dante Audio Networks

Highlights

Dante Network
Audio Interface

Low Noise Mic
Amplifiers

AES67 Option

Redundancy On
Network Links

Original Designed
For Orchestras

Suitable
For 2 x Musicians

Overview

Our Symphony musicians' audio monitoring and microphone amplifier was originally designed to meet one of our customers requirements. They had been using a similar analogue monitoring system for many years and when they updated their production mixer to a Dante enabled desk they naturally wanted to encompass and embrace the advantages of the network audio system to include their monitoring and musical instrument pre amplifiers.

The shape and feature set of the Symphony came from the customer's many years of experience from within the orchestral music industry. The simple controls for the musicians, the microphone amplifier setup hidden away from the musicians, the ability to mount the Symphony on a microphone stand and a clean blank audience facing side of the box were all key required features.



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Symphony Musicians' Interface

Description

The Symphony is designed to be mounted on a microphone stand and placed between 2 musicians.

Each musician has a set of monitoring controls on an ergonomically shaped sloping front panel, with a headphone monitoring output jack conveniently placed at the bottom of the controls. The monitoring controls allow each musician to adjust the volume of 3 incoming stereo audio mixes from the Dante network, allowing them to monitor their preferred mix at a level that they are happy with. Each musician is also provided with an instrument headphone volume control, so they can adjust the level of their own instrument in their own ears. A panning control is also provided for the instrument in case they only wish to monitor their own instrument in one ear or of centre. Finally an overall volume control is provided for each musician to allow one single control to adjust the overall volume of the whole mix.

On the front panel mounted centrally between the 2 sets of monitoring controls and at the top of the panel is a talkback microphone, at the bottom of the panel and within easy reach of each musician is a push to talk (PTT) switch that turns the talkback microphone on. This talkback circuit is very useful for communications between the musicians and sound control room.

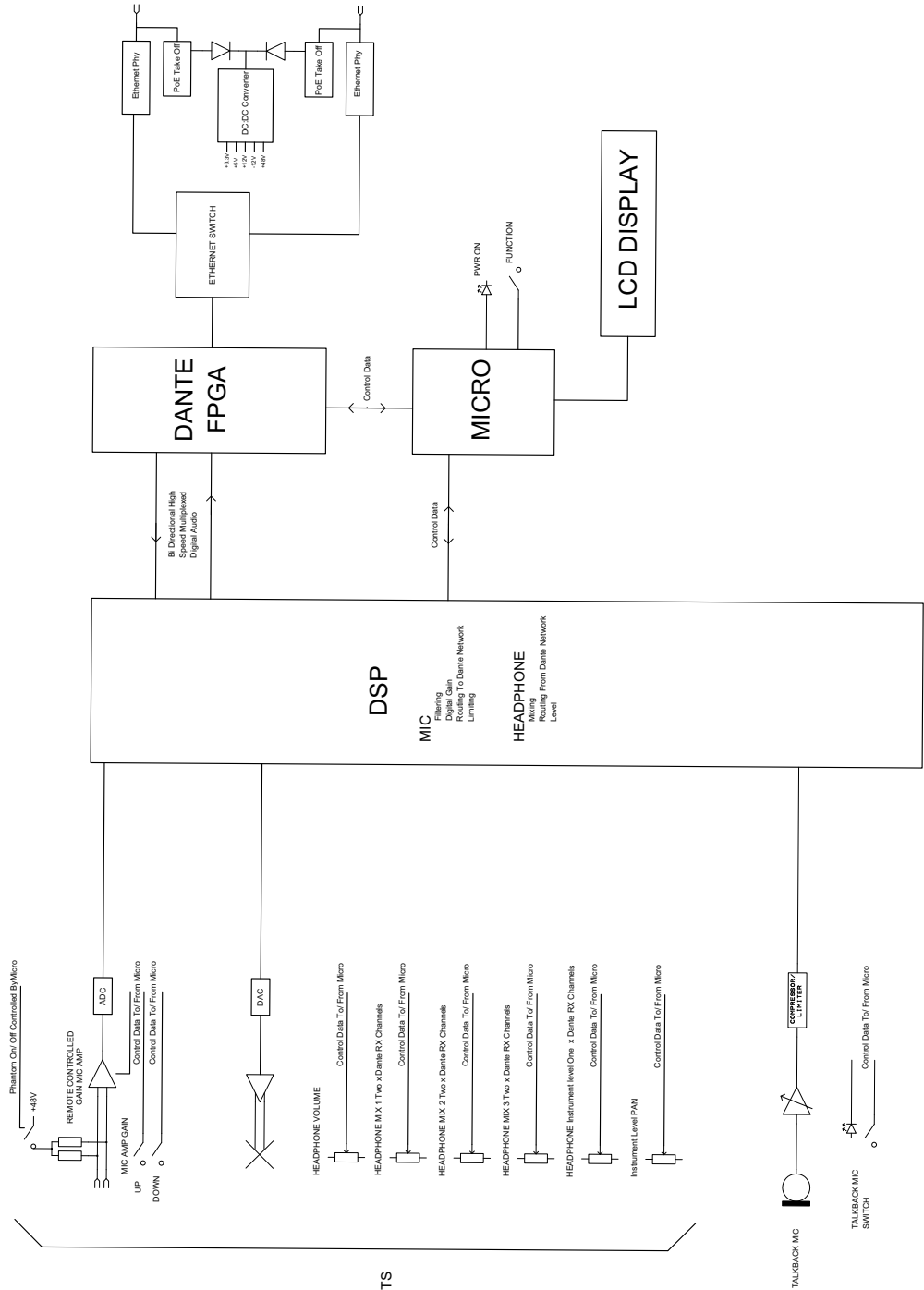
The bottom panel contains the 2 microphone inputs, 1 on each side of the unit allowing the microphone cable to enter the box in a tidy and organised way. The panel also contains simple engineering setup controls to adjust the microphone input gain, turn phantom power on/ off and also turn the internal compressor limiter circuit on/off. Connections to the Dante/ AES67 network are also located on the bottom panel, so like the microphone cables the network cables can easily be routed safely down the microphone stand.

There are 2 Dante network interfaces allowing a fully redundant network to be set up with primary and secondary Dante networks. Both of these interfaces are on Neutrik Ethercon connectors and both accept Power Over Ethernet (PoE).



Designed For Musicians

Block Diagram



2 x IDENTICAL MUSICIAN CIRCUITS (Only 1 Shown)



SYMPHONY

Designed For Musicians

Specification

MICROPHONE INPUTS

Mic Input Gain Range

-30dB to +15dB

Dynamic Mic Line Up

58dB

Mic + Phantom Power Line Up

35dB

Mic Input Impedance

2k4

Number Of Microphone Inputs

2

Equivalent Input Noise

127dBu (22-22kHz RMS terminated 300 Ohms)

Maximum Input Level Before Clipping

Dynamic Mic: +10dBu

Mic + 48V PH: +18dBu

Line: +18dBu

Frequency Response

Mic: > +/-0.25dB 50Hz to 22kHz
(-2 @ 25Hz)

THD + Noise (Ref +8dBu)

100Hz = 0.023%

1kHz = 0.012%

10kHz = 0.014%

POWER

PoE

2 x Redundant PoE Interfaces

Consumption

<12 Watts

DC Input

2.5mm Barrel, Centre +Ve, 9 - 15 Volts

Power On LED

Blue

INCLUDED ITEMS

Handbook

Physical A4 (download also available)

Rj45 Network Cable

2 metre Cat5 Rj45plug /Rj45plug cable

HEADPHONE OUTPUTS

Headphone Impedance

16 to 1000 Ohms

(Auto output level to match impedance)

Maximum Headphone Output

+16.8dB into 600 Ohms

Headphone Frequency Response

>= -0.1dB 22Hz to 22kHz

Headphone Noise

-76.6dB @ lineup (residual noise)

Headphone THD + Noise (ref =8dBu)

0.008% @ 1kHz

Headphone Volume Pot Range

+10dB to Off

Network

Dante/AES67 Network Interface

Sample Frequency: 48kHz

Resolution: 24 Bit

Can be configured for AES67

PHYSICAL

Size

185 x 122 x 182mm (WxDxH)

Weight

1.84Kg

Mechanics

All aluminium construction, anodized and laser etched, powder coated sides

Shipping Carton

Rugged export quality cardboard carton

610 x 420 x 170mm (WxDxH)

Shipping Weight

3.1Kg

OPTIONAL ITEMS

External Power Supply

Desktop style switch mode PSU

Dante 4 Musicians